AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1   1. (Currently amended) A ~~memory device storing a data structure~~computer

2 system for tracking network behavior, comprising:

3   a processor; and

4   a storage device storing a connection table that maps each node of a

5 network to a record that

6   stores information about traffic to or from the node and between

7   that node and ~~others~~ other nodes in the network[[.]], and

8   stores information indicating whether the node is operating as a

9   client or a server.

1   2. (Currently amended) The computer system~~device~~ of claim 1 wherein

2 the connection table includes a plurality of records that are indexed by source

3 address.

1   3. (Currently amended) The computer system~~device~~ of claim 1 wherein

2 the connection table includes a plurality of records that are indexed by destination

3 address.

1   4. (Currently amended) The computer system~~device~~ of claim 1 wherein

2 the connection table includes a plurality of records that are indexed by time.

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1   5. (Currently amended) The <u>computer system</u><s>device</s> of claim 1 wherein

2   the connection table includes a plurality of records, that are record objects, which

3   are indexed by source address, destination address and time.

1   6. (Currently amended) The <u>computer system</u><s>device</s> of claim 1 wherein

2   the connection table is a plurality of connection sub-tables each sub-table having

3   data pertaining to network traffic over different time scales.

1   7. (Currently amended) The <u>computer system</u><s>device</s> of claim 6 wherein

2   the connection sub-tables include a time-slice connection table that operates on a

3   small unit of time and at least one other sub-table that operates on a larger unit of

4   time than the time slice sub-table.

1   8. (Currently amended) The <u>computer system</u><s>device</s> of claim 7 wherein

2   the at <u>least</u> one <u>other</u> sub-table holds records received <s>from all</s><u>from</u> collectors

3   over the time scale of the table.

1   9. (Currently amended) The <u>computer system</u><s>device</s> of claim 5 wherein <u>an</u>

2   <u>address</u> <s>the addresses</s> indexing the connection table <s>are IP addresses</s><u>comprises an</u>

3   <u>IP address</u>.

1   10 (Currently amended) The <u>computer system</u><s>device</s> of claim 1 wherein

2   <s>the addresses</s><u>an address</u> indexing the connection table <s>include</s><u>includes</u> a physical

3   layer address to IP address map that is used to determine Host ID.

1   11. (Currently amended) The <u>computer system</u><s>device</s> of claim 1 wherein

2   <s>the host</s><u>a host</u> record of a first host maps that first host to a second host that

3   communicates with the first host to a host pair record object that has information

4   about ~~all the~~ traffic from the first to the second host and from the second host to
5   the first host.

1   12. (Currently amended) The computer system~~device~~ of claim 1 wherein
2   the connection table includes two level mapping that enables a consuming device
3   to obtain summary information about one host for a first level mapping and about
4   ~~the traffic~~traffic between any pair of hosts, in either direction, between a first ~~one~~
5   ~~of the hosts~~host of the any pair to a second ~~one of the hosts~~ host of the any pair
6   and from the second ~~one of the hosts~~host of the any pair to the first ~~one of the~~
7   ~~hosts~~host of the any pair for a second level mapping.

1   13. (Currently amended) The computer system~~device~~ of claim 1 wherein
2   the connection table comprises a plurality of host records, a host record stores a
3   measure of the number of bytes, packets, and connections that occurred between
4   hosts during a time-period.

1   14. (Currently amended) The computer system~~device~~ of claim 13, wherein
2   data in the host record is organized by well known transport protocols and well-
3   known application-level protocols.

1   15. (Currently amended) The computer system~~device~~ of claim 13, wherein
2   host records have no specific memory limit.

1   16. (Currently amended) The computer system~~device~~ of claim 1 wherein
2   for application-level protocols and for every pair of hosts, the connection table
3   stores statistics for traffic between [[the]] hosts.

1   17. (Currently amended) The computer system~~device~~ of claim 16 wherein

2   the connection table stores protocol-specific records as (protocol, count) key-

3   value pairs.

1   18. (Currently amended) A computer system~~memory device storing a data~~

2   ~~structure~~ for tracking network behavior, the computer system~~data structure~~

3   comprising:

4   a processor; and

5   a storage device storing a connection table that maps each node of a

6   network to a record that

7   stores connection information about traffic to or from the node and

8   between that node and ~~others~~ other nodes that have connections with the

9   node in the network, and

10   stores information indicating whether the node is operating as a

11   client or as a server,

12   the connection table indexed according to at least a first one of

13   source address, destination address and ~~time;~~ time; and

14   the connection table further including in the records fields for

15   storing statistical information for traffic between [[the]] hosts.

1   19 (Currently amended) The computer system~~device~~ of claim 18 wherein

2   the plurality of records is record objects.

1   20. (Currently amended) The computer system~~device~~ of claim 18 wherein

2   the connection table is a second plurality of connection sub-tables, each sub-table

3   having data pertaining to network traffic over different ones of corresponding

4   second plurality of time scales.

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1 21. (Currently amended) The <u>computer system</u>~~device~~ of claim 18 wherein
2 the connection sub-tables include a time-slice connection table that operates on a
3 small unit of time and at least one other sub-table that operates on a larger unit of
4 time than the time slice sub-table.

1 22. (Currently amended) The <u>computer system</u>~~device~~ of claim 18 wherein
2 the at <u>least</u> one <u>other</u> sub-table holds records received ~~from all~~<u>from</u> collectors in
3 the network over the time scale of the table.

1 23. (Currently amended) The <u>computer system</u>~~device~~ of claim 18 wherein
2 ~~the addresses~~<u>an address</u> indexing the connection table ~~are IP addresses.~~<u>comprises</u>
3 <u>an IP address.</u>

1 24. (Currently amended) The <u>computer system</u>~~device~~ of claim 23 wherein
2 ~~the addresses~~<u>an address</u> indexing the connection table ~~include~~<u>includes</u> a physical
3 layer address to IP address map that is used to determine Host ID.
4
5 25. (Currently amended) The <u>computer system</u>~~device~~ of claim 18 wherein
6 ~~the host~~<u>a host</u> record of a first host maps that first host to a second host that
7 communicates with the first host to a host pair record that has information about
8 ~~all the~~traffic from the first to the second host and from the second host to the first
9 host.

1 26. (Currently amended) The <u>computer system</u>~~device~~ of claim 18 wherein
2 the connection table includes two level mapping that enables a consuming device
3 to obtain summary information about one host for a first level mapping and about
4 the traffic between any pair of hosts, in either direction, between a first ~~one of the~~
5 ~~hosts~~<u>host</u> of the any pair to a second ~~one of the hosts~~<u>host</u> of the any pair and from

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6   the second ~~one of the hosts~~<u>host</u> of the any pair to the first ~~one of the hosts~~<u>host</u> of

7   the any pair for a second level mapping.

1   27. (Currently amended) The <u>computer system</u>~~device~~ of claim 18 wherein

2   the connection table comprises a plurality of host records, a host record stores, a

3   measure of the number of bytes, packets, and connections that occurred between

4   hosts during a time-period.

1   28. (Currently amended) The <u>computer system</u>~~device~~ of claim 27 wherein

2   data in the host record is organized by well known transport protocols and well-

3   known application-level protocols.

1   29. (Currently amended) The <u>computer system</u>~~device~~ of claim 28 wherein

2   for application-level protocols and for every pair of hosts, the connection table

3   stores statistics for traffic between [[the]] hosts.

1   30 (Currently amended) The <u>computer system</u>~~device~~ of claim 28 wherein

2   the connection table stores protocol-specific records as (protocol, count) key-

3   value pairs.